PINAL COUNTY

AQI AIR QUALITY INDEX

FORECAST

GOOD (0-50)	MODERATE (51-100)	UNHEALTHY FOR SENSITIVE GROUPS (USG) (101-150)	UNHEALTHY (151-200)	VERY UNHEALTHY (201-300)	HAZARDOUS (301-500)

This forecast is updated by 10:00 a.m. Monday through Friday and as needed
(AQI Forecast on Twitter – see tables below for location-specific Twitters)

	Highest AQI value/site in Pinal County yesterday	Highest AQI forecasted value					
	TUES 8/1/23	WED 8/2/23	THURS 8/3/23	FRI 8/4/23	SAT 8/5/23	SUN 8/6/23	MON 8/7/23
OZONE	104 Pinal Air Park	*101*	*100*	*90*	*80*	*70*	*70*
$PM_{2.5}$ **	19 Casa Grande	*20*	*20*	*25*	*25*	*30*	*30*
PM_{10} **	28 Stanfield	*45*	*35*	*50*	*45*	*55*	*60*
** Excludes the Hidden Valley Monitor, see Hidden Valley table below		*Ozone* HPA					

HPW - Symbol for **High Pollution Watch (HPW)** – Issued when there is potential for a pollutant to exceed the federal health standard. Issued in advance (2 or more days) as a lookout for potential poor air quality (Above 100 AQI). As the date nears and the confidence in the forecast increases, the High Pollution Watch will be upgraded to a High Pollution Advisory.

HPA - Symbol for **High Pollution Advisory (HPA)** – When it's imminent or there is a high probability for a pollutant to exceed the federal health standard.

AQI and your health | Air Quality Guide for Ozone | Air Quality Guide for Particulates

Discussion

Updated Wednesday, August 2, 2023

Ozone High Pollution Advisory – August 2, 2023

The area of high pressure currently centered over Texas will slowly expand westward and center over southeast Arizona later this weekend. In other words, the high temperatures will climb back toward the 110s while the dry southwest flow diminishes the storm chances after today. National Weather Service has issued an Excessive Heat Warning for Friday, Saturday, and Sunday.

Pinal Air Park's ozone exceeded the health standard's 8-hour average yesterday. With similar conditions today, the ozone level is forecast to exceed again, so we are issuing an ozone High Pollution Advisory. Anyone with respiratory and/or heart ailments should limit outdoor activities during afternoons to reduce possible health impacts. Later this week when the afternoon breezes become strong enough to disperse the ozone away, the daily 8-hour average should decline into the Moderate.

Our particulate levels evidentially lingered in the Good AQI category mostly due to recent rainfall that stabilized our topsoil and light winds yesterday. While the afternoon breezes pick up a little more daily, the PM10 levels are forecast to slowly ascend toward the Moderate by Sunday when the afternoon gusts have a potential of reaching 20 mph.

Have a good day.

HOURLY MONITORING DATA (Draft, preliminary data - subject to change)
MONITORING NETWORK MAP YESTERDAY'S AQI LEVELS

	Yesterday's Daily Maximum AQI @ Hidden Valley	HIDDEN VALLEY (HV) $PM_{2.5 \text{ and } 10}$ AQI FORECAST					
	TUES 8/1/23	WED 8/2/23	THURS 8/3/23	FRI 8/4/23	SAT 8/5/23	SUN 8/6/23	MON 8/7/23
HV PM2.5	*N/A*	*30*	*25*	*35*	*30*	*30*	*30*
HV PM10 (Twitter: HV_AQI)	*43*	*40*	*50*	*40*	*45*	*40*	*40*

AIR POLLUTANTS IN DETAIL

PM_{10} & $PM_{2.5}$ (PARTICLES):

Description – The term "particulate matter" (PMS) includes both solid particles and liquid droplets found in air. Many manmade and natural sources emit PM directly or emit other pollutants that react in the atmosphere to form PM. Particles less than 10 micrometers in diameter tend to pose the greatest health concern because they can be inhaled into and accumulate in the respiratory system. Particles less than 2.5 micrometers in diameter are referred to as "fine" particles and are responsible for many visibility degradations such as the "Valley Brown Cloud" (see http://www.phoenixvis.net/). Particles with diameters between 2.5 and 10 micrometers are referred to as "coarse".

Sources – Fine = All types of combustion (motor vehicles, power plants, wood burning, etc.) and some industrial processes. Coarse = crushing or grinding operations and dust from paved or unpaved roads.

Potential health impacts – PM can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases, such as asthma and chronic bronchitis.

Units of measurement – Micrograms per cubic meter (ug/m^3)

Averaging interval – 24 hours (midnight to midnight).

Reduction tips – Stabilize loose soils, slow down on dirt roads, and carpool.

O_3 OZONE:

Description – This is a secondary pollutant that is formed by the reaction of other primary pollutants (precursors) such as VOCs (volatile organic compounds) and NOx (Nitrogen Oxides) in the presence of heat and sunlight. The ozone "season" generally occurs during the spring and summer months (April-October) when high temperatures and extended daylight hours create the conditions most conducive to ozone formation.

Sources – VOCs are emitted from motor vehicles, chemical plants, refineries, factories, and other industrial sources. NOx is emitted from motor vehicles, power plants, and other sources of combustion.

Potential health impacts – Exposure to ozone can make people more susceptible to respiratory infection, result in lung inflammation, and aggravate pre-existing respiratory diseases such as asthma. Other effects include a decrease in lung function, chest pain, and cough.

Unit of measurement – Parts per million (ppm).

Averaging interval – Highest eight-hour period within a 24-hour period (midnight to midnight).

Reduction tips – Curtail daytime driving, refuel cars and use gasoline-powered equipment as late in the day as possible.